



Intro to Ratio Studies & Cyclical Reassessment

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Intro to Ratio Studies & Cyclical Reassessment

- Ratio Studies
 - Why are ratio studies important?
 - What is a ratio study?
 - How do I conduct a ratio study?
- Cyclical Reassessment
 - What is cyclical reassessment?
 - What is the timeline?
 - What does the reassessment plan look like?
 - How do I complete the progress reports?



Why Are Ratio Studies Important?



Importance of Ratio Studies

- Market Value-In-Use standard
 - Required by Indiana law
 - Sale price of property:
 - On open market,
 - For same use, and
 - With willing buyer and seller.
- Ratio studies confirm market value-in-use assessment of real property.



What is a Ratio Study?



Ratio Study

- Compares assessments to sale prices of similar properties.
- **Sales ratio** shows how close a property's assessment is to its sales price.
- Sales ratios are analyzed to see if properties are assessed at market value-in-use.



The Sales Ratio

- A property's **Assessed Value** divided by its **Sale Price**.

Assessed Value

Sales Price



The Sales Ratio

- Shows whether property is assessed correctly:
 - Less than 1: Under-assessed
 - Greater than 1: Over-assessed
 - Exactly 1: Assessed correctly



The Sales Ratio

Example 1



- Assessed Value: \$90,000
- Sale Price: \$100,000
- Ratio: 0.90



The Sales Ratio

Example 2



- Assessed Value: \$120,000
- Sale Price: \$100,000
- Ratio: 1.20



Conducting a Ratio Study



Conducting a Ratio Study

- Three Steps:
 - Grouping Properties
 - Choosing Sales
 - Analyzing Sales Ratios



Grouping Properties

- Like properties are grouped into **Neighborhoods**.
- A **neighborhood** is a collection of like properties:
 - Similar features
 - Same market behavior
 - Often near one another
- Examples:
 - Brick ranch houses in a subdivision
 - Downtown fast food restaurants
 - Two-story houses with a lakefront view



Grouping Properties

- Most properties will already have a neighborhood.
- Neighborhoods typically set at reassessment...
- But may be changed any time.



Sales Window

- Due to recent legislation, sales window has changed.
- For 2015, use sales from:
 - Jan 1, 2014 to
 - March 1, 2015
- For 2016 (and later), use sales from:
 - Jan 1, 2015 to
 - Jan 1, 2016
- Older sales may also be used.
 - Up to 5 years back
 - Time adjust if necessary



Sales Data & Validity

- Sales Data Files
 - SALEDISC, SALEPARCEL, and SALECONTAC.
 - Contain all sales for the year.
 - Exported from CAMA or other software (e.g. iDOX).
 - Reviewed by the Department's Data Division.
- Sales used in ratio study are called **Valid** sales.
 - Good estimates of market value.
 - Indicate in SALEDISC file by marking "Valid for Trending" field "Yes".
- Must explain all sales marked "Valid for Trending" but not used in ratio study.



Sales Validity

- Some sales may not be suitable for a ratio study:
 - Multi-parcel sales
 - Non-warranty deeds
 - Land contracts
 - Foreclosures
 - Auctions
- These types of sales are called **Invalid**.
- All sales should be carefully evaluated.
- Sales should not be excluded without good reason.



Choosing Sales

- The following sales took place in Indiana in 2013:



Microsoft Office
Excel Worksheet



Analyzing Sales Ratios

- Indiana standards for real property assessment.
- Four parts:
 - Level
 - Uniformity
 - Vertical Equity
 - Horizontal Equity



Analyzing Sales Ratios

- **Assessment Level**
 - Is typical property assessed close to market value-in-use?
 - Measure: Median sales ratio
 - Standard: Between 0.90 and 1.10 (All properties)
 - Calculation: The median is the middle value of a list of numbers.
 - Arrange ratios from lowest to highest.
 - If the number of ratios are odd, then the median is the ratio that divides the list in half.
 - Otherwise, the median is the average of the two middle values.



Analyzing Sales Ratios

- Assessment **Uniformity**:
 - Are other properties assessed close to the typical property?
 - Measure: Coefficient of Dispersion (COD)
 - Standards: Under 15%: (Res. Improved)
Under 20%: (Other properties)
 - The COD tells you how far apart the other ratios are from the median ratio.



Analyzing Sales Ratios

- Calculating the COD:
 - First, calculate the median ratio.
 - Subtract the median ratio from each sales ratio.
 - Take the absolute value of each difference.
 - Calculate the average of the absolute differences.
 - Divide this average by the median.



Analyzing Sales Ratios

- Vertical Equity:
 - Are high and low-value properties assessed with the same standard?
 - Measure: Price Related Differential (PRD)
 - Standard: Between 0.98 and 1.03 (All properties)
 - The PRD is used only if there are more than 20 sales.
 - If between 5 – 20 sales, the Department uses the Spearman Rank test instead.
 - Can't check vertical equity if less than 5 sales.



Analyzing Sales Ratios

- Calculating the PRD:
 - Calculate the average ratio.
 - Sum the assessed values and the sales prices.
 - Divide the first sum (total AV) by the second (total sale price). This is the weighted average.
 - Divide the average by the weighted average.



Analyzing Sales Ratios

- Horizontal Equity:
 - Are sold and unsold properties assessed with the same standard?
 - Measure: Mann-Whitney test
 - Standard: At least 95% neighborhoods must pass.
 - This is the primary test for “sales chasing.”
 - Calculation best left to statistics software.



Analyzing Sales Ratios

Sold Parcels

4.9%

4.6%

4.8%

5.0%

12.3%

13.0%

24.5%

Unsold Parcels

5.2%

4.8%

8.4%

9.5%

11.7%

13.6%

25.6%

5.0%

5.2%

7.4%

4.0%

4.4%

6.0%

3.0%

Test Statistics

	Pct Change
Mann-Whitney U	93
Z	-.465
Asymp. Sig. (2-tailed)	.642



Analyzing Sales Ratios

Sold Parcels

10.0%
10.0%
10.0%
10.0%
10.0%
10.0%
10.0%

3.0%
3.0%
3.0%
3.0%
3.0%
3.0%
3.0%

Unsold Parcels

3.0%
3.0%
3.0%
3.0%
3.0%
3.0%
3.0%

Test Statistics^a

	Pct Change
Mann-Whitney U	0
Z	-4.472
Asymp. Sig. (2-tailed)	.000

a. Grouping Variable: VAR00002



What is Cyclical Reassessment



Cyclical Reassessment

- Per Senate Enrolled Act 19-2012, starting July 1, 2014, a “general reassessment” of property has been replaced with a “cyclical reassessment.” (That refers to the reassessment of 25% of the parcels in each year of the cycle.)
- The basic premise of a “cyclical reassessment” is to spread the reassessment activities, including the inspection and updating of all of the parcels and parcel characteristics, in an assessment jurisdiction, over a four (4) year period instead of a twenty (20) month period.



Cyclical Reassessment

- The reassessment plan must divide all parcels of real property in the county into four (4) different groups of parcels.
- Each group of parcels must contain approximately twenty-five percent (25%) of the parcels within each class of real property in the county.
- The Department shall determine the classes of real property to be used for purposes of this section.



Cyclical Reassessment

- Subject to review and approval by the Department, the county assessor may modify the reassessment plan.
- A county may submit a reassessment plan that provides for reassessing more than twenty-five percent (25%) of all parcels of real property in the county in a particular year.
 - A plan may provide that all parcels are to be reassessed in one (1) year. However, a plan must cover a four (4) year period.
 - All real property in each group of parcels shall be reassessed under the county's reassessment plan once during each reassessment cycle.



What is the Timeline?



Cyclical Reassessment

- **The following are the effective dates for the cyclical reassessment:**
 - July 1, 2013: The county assessor must have submitted their cyclical reassessment plan to the Department.
 - March 1, 2014: The Department must have reviewed and approved the plan before this date.
 - July 1, 2014: The reassessment of the first 25% of the parcels within each property class within the county starts.
 - January 1, 2015: The reassessment of the first 25% of the parcels must be completed (per SEA 420 – 2014).



Cyclical Reassessment

- May 1, 2015: The reassessment of the second 25% of the parcels within each property class within the county starts (per SEA 420 – 2014).
- January 1, 2016: The reassessment of the second 25% of the parcels must be completed.
- May 1, 2016: The reassessment of the third 25% of the parcels within each property class within the county starts.
- January 1, 2017: The reassessment of the third 25% of the parcels must be completed.



Cyclical Reassessment

- May 1, 2017: The reassessment of the fourth 25% of the parcels within each property class within the county starts.
- January 1, 2018: The reassessment of the fourth 25% of the parcels must be completed.
- May 1, 2018: The reassessment of the first 25% of the parcels within each property class within the county for the next four year cyclical reassessment starts.



Plans and Progress Reports



Plans and Progress Reports

- Every fourth year, the assessor must submit a cyclical reassessment plan to the Department.
- Plan details the parcels to be assessed in the next cyclical reassessment, and must be approved by the Department.
- Submission deadlines:
 - May 1, 2017: Plan for 2018 cyclical reassessment due.
 - January 1, 2018: the Department must complete review.



Microsoft Office
Excel Worksheet



Plans and Progress Reports

- The assessor must submit monthly cyclical reassessment progress reports to the Department.
- Reports stratify parcels into three groups:
 - Residential
 - Agricultural
 - Commercial/Industrial/Other
- For each group, list:
 - Number of parcels
 - Number of parcels inspected
 - Number of parcels updated in CAMA



Adobe Acrobat
Document



Questions?



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